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# (12) United States Patent

# **Pasquale**

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#### (54) ELECTROMAGNETIC PULSE—WELDING DEVICE FOR WELDING METAL SHEET, COMPRISING A COOLING INSULATOR

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(Continued)

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(Continued)

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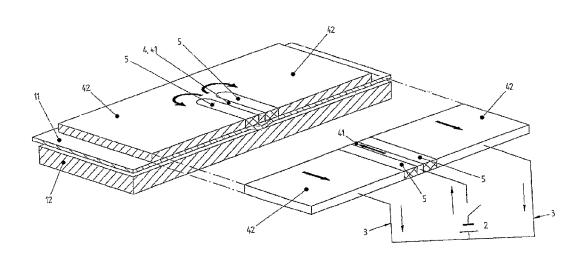
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## (57) **ABSTRACT**

The invention relates to an electromagnetic pulse-welding device for joining a metal sheet to a metal part, consisting of an electric energy source which is connected to a coil by means of a current conductor, the active part of said coil being in the direct proximity of the metal sheet, said metal sheet being at a distance from the metal part. The passive part of the coil has a larger cross-section than the active part and said active part borders on one part of the surface in a positive fit, to a cooling insulator, the material having a relatively high thermal conductivity and a relatively low magnetic and electric conductivity compared to the material of the coil.

### 16 Claims, 3 Drawing Sheets



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